

IN THE CLAIMS

Please amend the claims to read as follows:

1. (Currently amended) A method for removing acrolein from a process stream comprising
 - (a) providing a process stream comprising acrolein; and
 - (b) reacting said acrolein in the presence of an acid catalyst with a scavenger compound containing a reactable thiol or hydroxyl moiety to form an acrolein derivative in a refined process stream.
2. (Original) The method of claim 1 wherein said acid catalyst is a solid acid catalyst.
3. (Original) The method of claim 1 wherein said process stream further comprises said acid catalyst.
4. (Original) The method of claim 1 further comprising adding said acid catalyst to said process stream prior to said reaction step (b).
5. (Original) The method of claim 1 wherein said reaction step (b) is conducted at a pH of between 3.0 and 7.0.
6. (Original) The method of claim 4 wherein said acid catalyst is selected from the group consisting of glycolic acid and acetic acid.
7. Cancelled.
8. (Currently amended) The method of claim 7 wherein said process stream further comprises water.

9. (Original) The method of claim 8 wherein said process stream includes 2.0 % to 3.0% by weight water at commencement of said reaction step (b).
10. (Original) The method of claim 9 further comprising the step of reducing the water content of said process stream to no more than 0.5% water.
11. (Original) The method of claim 1 wherein said acrolein derivative is an acrolein acetal.
12. Cancelled.
13. Cancelled.
14. Cancelled.
15. (Original) The method of claim 1 further comprising separating said acrolein derivative from said refined process stream.
16. (Original) The method of claim 15 comprising distillation of said refined process stream.
17. (Original) The method of claim 1 wherein said process stream further comprises acrylonitrile.
18. (Original) The method of claim 1 wherein said reacting step is performed in the substantial absence of a cyanide compound.
19. (Original) The method of claim 1 wherein said process stream further comprises acrylic acid.

20. (Currently amended) A method for removing acrolein from a process stream comprising

- (a) providing a process stream comprising acrolein; and
- (b) reacting said acrolein with a scavenger compound containing a reactable thiol or hydroxyl moiety at a pH of between 3.0 and 7.0 to form an acrolein derivative in a refined process stream.

21. (New) A method for removing acrolein from an acrylonitrile process stream comprising

- (a) providing an acrylonitrile process stream comprising acrolein; and
- (b) reacting said acrolein in the presence of an acid catalyst with a scavenger compound containing a reactable thiol or hydroxyl moiety to form an acrolein derivative in a refined process stream.

22. (New) The method of claim 21 wherein said acid catalyst is a solid acid catalyst.

23. (New) The method of claim 21 wherein said process stream further comprises said acid catalyst.

24. (New) The method of claim 21 further comprising adding said acid catalyst to said process stream prior to said reaction step (b).

25. (New) The method of claim 24 wherein said acid catalyst is selected from the group consisting of glycolic acid and acetic acid.

26. (New) The method of claim 21 wherein said process stream further comprises water.

27. (New) The method of claim 26 wherein said process stream includes 2.0 % to 3.0% by weight water at commencement of said reaction step (b).

28. (New) The method of claim 2 further comprising the step of reducing the water content of said process stream to no more than 0.5% water.

29. (New) The method of claim 21 further comprising separating said acrolein derivative from said refined process stream.

30. (New) The method of claim 29 comprising distillation of said refined process stream.

31. (New) The method of claim 21 wherein said reaction step (b) is conducted at a pH of between 3.0 and 7.0.

32. (New) The method of claim 21 wherein said acrolein derivative is an acrolein acetal.

33. (New) The method of claim 21 wherein said scavenger compound contains a reactable thiol moiety.

34. (New) The method of claim 33 wherein said scavenger compound is selected from the group consisting of mercaptoacetic acid, 2-mercptoethanol, 2aminoethanethiol and ethylene glycol bisthioglycolate.

35. (New) The method of claim 21 wherein said acrolein derivative is an acrolein thioacetal.

36. (New) The method of claim 21 wherein said reacting step is performed in the substantial absence of a cyanide compound.

37. (New) The method of claim 21 wherein said process stream further comprises acrylic acid.

38. (New) The method of claim 21 wherein said scavenger compound contains a reactable hydroxyl moiety.

39. (New) A method of removing acrolein from an acrylonitrile process stream comprising

- (a) providing an acrylonitrile process stream comprising acrolein; and
- (b) reacting said acrolein with a scavenger compound containing a reactable thiol or hydroxyl moiety of a pH of between 3.0 and 7.0 to form an acrolein derivative in a refined process stream.